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# Fish Lines

## Region 3 - Great Lakes/Big Rivers

*Leadership in Conserving, Enhancing, and Restoring  
Aquatic Ecosystems*

### New Plan Aims to Restore Brook Trout

(See the "Feature Story" on Page 5)



-Greg Alexander

## Feature Story - New Plan Aims to Restore Brook Trout

With the aim of protecting and boosting dwindling populations of brook trout, the Wisconsin Department of Natural Resources (DNR) and the Fish and Wildlife Service this summer released the Wisconsin Lake Superior Brook Trout Plan.

The plan's goal is "to protect and improve the self-sustaining brook trout populations and their habitat in Wisconsin's Lake Superior Basin, and attempt to rehabilitate or establish several populations that exhibit life history diversity (both stream resident and migratory 'coaster' life history types)."

The Red Cliff and Bad River tribes assisted the Fish and Wildlife Service and DNR in developing the plan by recommending two of the five priority Northern Wisconsin locations for brook trout restoration identified in the plan. The five priority locations are the Brule, Bark, and Raspberry rivers, and Whittlesey and Graveyard creeks. At each of these locations, the plan proposes a variety of objectives and activities to rehabilitate brook trout.

The objective for Whittlesey Creek is to establish a self-sustaining brook trout population that exhibits a migrating life history. Activities to accomplish this objective include repeating a 1977 DNR comprehensive fish survey in 2001, establishing index stations in the stream and lake that are sampled annually, stocking various life stages (egg, fry, yearlings, and adults are stocked on a rotating schedule to allow evaluation) over seven years, with two strains that originated from Isle Royale and no harvest regulations. An engineered log jam was installed to test its effectiveness in reducing stream velocity and providing habitat. To date, 50,000 eggs, 20,000 fingerlings, 2,000 yearlings, and 125 adults have been stocked. Biologists have evaluated the stocking efforts through annual sampling of the index stations and by monitoring the fishes' movements using radio telemetry.

The plan's objective for the Brule and Bark rivers and Graveyard Creek is to increase brook trout abundance to reconnect the stream population with the lake habitat. Activities to achieve this objective include adding spawning gravel, controlling beaver to allow unimpeded flow and re-expose spawning gravel, adding large wood to improve stream hydrology and fish habitat, and restrictive angling regulations. Biologists improved fish passage in the Brule and Bark rivers by replacing perched culverts and in Graveyard Creek by removing a barrier log jam.



-USFWS photos

(Lt. to Rt; Top) Henry Quinlan (left) and Dennis Pratt stock brook trout eggs into a gravel bed in Whittlesey Creek; Fish habitat is improved by adding engineered log jams; (Bottom) Horses provide for a low impact fish habitat improvement project; Jess Krajniak demonstrates the use of brook trout telemetry equipment to students.

The goal for the Raspberry River is to rehabilitate brook trout and their habitat. Activities so far have included a habitat survey that identified target areas for restoration, reclamation, and remediation using bio-engineering. In addition, the Red Cliff Band has been stocking all life stages of the Nipigon strain brook trout in Buffalo and Raspberry bays in hopes that fish will migrate up the river. Currently, the tribe and the Fish and Wildlife Service are conducting assessment activities along the lakeshore to evaluate the effectiveness of stocking activities.

To evaluate stocking, crews electrofished a 13 km transect of shoreline four times in 2004 and seven times in 2005. A total of 38 brook trout were caught, examined for a fin clip (indicating hatchery origin), tagged with a numbered Floy tag, and measured and released. A tissue sample was collected from unmarked fish for genetic analysis to determine origin.

The partners working on this effort, plan to continue as much as personnel and funding allow until the goal is reached.

A copy of the *Wisconsin Lake Superior Brook Trout Plan* can be viewed on the Ashland FRO website at: [http://www.fws.gov/midwest/ashland/basinbktpn/Final\\_WI\\_Brook\\_Trout\\_Plan\\_May\\_2005.pdf](http://www.fws.gov/midwest/ashland/basinbktpn/Final_WI_Brook_Trout_Plan_May_2005.pdf)